UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,771	01/16/2001	Brian Keith Schmidt	0007056-0057/P5317/BBC	7449

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BRIAN M BERLINER, ESQ
O'MELVENY & MYERS, LLP
400 SOUTH HOPE STREET
LOS ANGELES, CA 90071-2899

EXAMINER
ALI, SYED J

ART UNIT	PAPER NUMBER
2127	6

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)	
Office Action Summary	09/764,771		SCHMIDT, BRIAN KEITH	
	Examiner		Art Unit	
	Syed J Ali		2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2001*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the method of claim 4" in line 1. There is insufficient antecedent basis for this limitation in the claim. Hereinafter, it is assumed that the above limitation is meant to read "the method of claim 3".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 13-14, and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Jagannathan et al. (USPN 6,496,871) (hereinafter Jagannathan).

As per claim 1, Jagannathan teaches the invention as claimed, including a method for representing an active computing environment comprising:

encapsulating one or more active processes into said active computing environment (col. 8 line 65 - col. 9 line 12); and

encapsulating a system environment relating to said processes into said active computing environment (col. 10 lines 47-64).

As per claim 2, Jagannathan teaches the invention as claimed, including the method of claim 1 wherein said system environment comprises an associated state of said active processes (col. 9 lines 13-31).

As per claims 13-14, Jagannathan teaches the invention as claimed, including a representation of an active computing environment corresponding to claims 1-2, respectively (col. 8 line 65 - col. 9 line 12; col. 10 lines 47-64).

As per claims 25-26, Jagannathan teaches the invention as claimed, including a computer program product comprising:

a computer usable medium having computer readable program code embodied therein configured to implement the method of claims 1-2, respectively (col. 1 lines 10-16).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 3-12, 15-24, and 27-36 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Jagannathan in view of Schrimpf ("Migration of Processes, Files, and Virtual Devices in the

MDX Operating System").

As per claim 3, Schrimpf teaches the invention as claimed, including the following

limitations not shown by Jagannathan, specifically the method of claim 2 further comprising:

removing a process from said active computing environment when said process becomes

inactive (pg. 72 section 3.1; pg. 77 section 5.3).

It would have been obvious to one of ordinary skill in the art to combine Jagannathan and

Schrimpf since the method of Jagannathan, while allowing portability of processes and

maintaining state information, fails to specifically disclose what types of state information may

be encapsulated within a process. Schrimpf is also related to process migration, and goes one

step further to specifically state the types of information that may be held within the operating

state of a process. Schrimpf also teaches additional features that ease process migration that

would be equally applicable to Jagannathan.

As per claim 4, Schrimpf teaches the invention as claimed, including the method of claim

3 further comprising:

adding a process to said active computing environment when said process becomes active

(pg. 72 section 3.1; pg. 77 section 5.3).

As per claim 5, Schrimpf teaches the invention as claimed, including the method of claim

1 further comprising:

halting said active computing environment (pg. 76, section 5.1).

As per claim 6, Schrimpf teaches the invention as claimed, including the method of claim

5 further comprising:

storing said active computing environment off-line in a non-volatile storage medium (pg.

71 section 2, pgs. 80-81, Conclusion).

As per claim 7, Schrimpf teaches the invention as claimed, including the method of claim

6 wherein said non-volatile storage medium is a disk (pg. 71, section 2).

As per claim 8, Schrimpf teaches the invention as claimed, including the method of claim

2 wherein said state further comprises a CPU state (pg. 77, section 5.3).

As per claim 9, Schrimpf teaches the invention as claimed, including the method of claim

2 wherein said state further comprises a file system state (pg. 77, section 5.3).

As per claim 10, Schrimpf teaches the invention as claimed, including the method of claim 2 wherein said state further comprises a device state (pg. 77, section 5.3).

As per claim 11, Schrimpf teaches the invention as claimed, including the method of claim 2 wherein said state further comprises a virtual memory state (pg. 77, section 5.3).

As per claim 12, Schrimpf teaches the invention as claimed, including the method of claim 2 wherein said state further comprises an inter-process communication state (pg. 77, section 5.3).

As per claims 15-24, Jagannathan teaches the invention as claimed, including a representation of an active computing environment corresponding to claims 3-12, respectively (col. 8 line 65 - col. 9 line 12; col. 10 lines 47-64).

As per claims 27-36, Jagannathan teaches the invention as claimed, including a computer program product comprising:

a computer usable medium having computer readable program code embodied therein configured to implement the method of claims 3-12, respectively (col. 1 lines 10-16).

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

USPN 6,477,698 to Shalish teaches encapsulation of hardware processes.

USPN 6,698,017 to Adamovits et al. teaches software migration on a hardware level.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Syed J Ali whose telephone number is (703) 305-8106.   The

examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai T An can be reached on (703) 305-9678.   The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system.   Status information for published applications

may be obtained from either Private PAIR or Public PAIR.   Status information for unpublished

applications is available through Private PAIR only.   For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Syed Ali
March 23, 2004

MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100